

ABSTRACT

A method and apparatus is described for providing a collapsible support structure, which may comprise a plurality of interconnected frame sections each of which may comprise a first elongated rigid member having a first end and a second end; a second elongated rigid member having a first end and a second end; wherein
5 the first end of the first elongated rigid member and the second elongated rigid member are hingedly joined; a collapsible elongated member which may comprise an elongated flexible tensioning member connected between the second end of the of the first elongated rigid member and the second end of the second elongated
10 rigid member; a first hollow tubular rigidizing member extending along a portion of the length of the elongated flexible tensioning member; a second hollow tubular rigidizing member extending along essentially the remainder of the length of the elongated flexible tensioning member; and a rigidizing sleeve member slideably mounted on the first or the second hollow tubular member and sized to slideably
15 engage the other of the first and second hollow tubular when the first and second hollow tubular rigidizing members are essentially axially aligned and the rigidizing sleeve member is positioned to slideably engage each of the hollow tubular rigidizing members to form a collapsible elongated tubular member extending essentially between the second ends of each of the first and second elongated rigid
20 members and having the elongated flexible tensioning member axially disposed therein. The apparatus and method may employ the interconnected frame sections on the form of a triangle or a parallelogram, and may form a portion of a geodesic structure, such as a truncated icosahedron, which in turn may have first and second lesser circle polygonal shapes, with the hingedly joined first ends of the first and
25 second elongated rigid members being joined at a corner of the first lesser circle polygonal shape and the collapsible elongated tubular member forming a side of the second lesser circle polygonal shape. The method and apparatus may use one-piece elongated rigid members. The sections may form parallelograms using first, second and third elongated rigid members and first and second rigidizing means,
30 with each of the rigidizing means in each section forming a side of a separate one of the lesser circle polygonal shapes.